

REMARKS

This Application has been carefully reviewed in light of the Final Office Action dated August 21, 2008 ("*Office Action*") and the Advisory Action mailed November 7, 2008. Claims 1-46 are pending. Applicants cancel Claims 1-23 without prejudice or disclaimer. Applicants add Claims 25-46. Applicants respectfully request reconsideration and allowance of all pending claims.

Section 102 and 103 Rejections

A. The Cited References Fail to Disclose Each and Every Claim Element

The Examiner rejects Claims 1 and 3-4 under 35 U.S.C. § 102(b) as being anticipated by Maya Unlimited 2.0, User's Guide © 1998-1999 ("*Maya*"). The Examiner rejects Claims 2 and 5-24 under 35 U.S.C. § 103(a) as being unpatentable over *Maya* in view of U.S. Patent No. 5,619,625 issued to Konno et al. ("*Konno*"). Applicants respectfully request reconsideration and allowance of all pending claims.

Claim 24 is allowable at least because the cited references fail to disclose, teach, or suggest, "converting the P x 1 surface condition *of the first surface* into a second N x M surface to match the N x M surface condition of the second surface."¹ As an initial matter, Applicants note that the *converting* limitation is in addition to two determining limitations corresponding to *first* and *second surfaces*, respectively. Therefore, the burden is on the Examiner to explain how the cited references could possibly be used in combination to establish the claimed determining steps of the *first* and *second surfaces*, in addition to *converting* a P x 1 surface condition of the *first surface*, which the Examiner has failed to do.

¹ "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987); MPEP § 2131. In addition, "[t]he identical invention must be shown in as complete detail as is contained in the . . . claims" and "[t]he elements must be arranged as required by the claim." *Richardson v. Suzuki Motor Co.*, 9 U.S.P.Q.2d 1913, 1920 (Fed. Cir. 1989); *In re Bond*, 15 U.S.P.Q.2d 1566 (Fed. Cir. 1990); MPEP § 2131 (*emphasis added*).

The Advisory Action on page 2 states that “the ‘lofted surface’ of *Maya* is the second surface having an NxM surface condition, while the ‘side-curve extensions’ are understood to be the first surface having a Px1 surface condition that is being converted to the second NxM surface;” and the Advisory Action further states on page 2 that it does not rely on *Maya* to teach “converting a Px1 surface condition of the first surface,” but rather the Examiner relies on *Konno*. This suggested combination, however, fails to teach the limitations of Claim 24. More specifically, the Examiner incorrectly relies on the “side-curve extensions” and the “lofted surface” of *Maya* to teach the claimed ***first*** and ***second*** surfaces at least because *Maya* fails to illustrate or describe the “lofted surface” as having one surface condition that differs from another surface condition of its own “extensions,” which could then be ***converted*** to match. Indeed, even the term “extension” implies an extension or matching of any source conditions; and any subsequent conversion would thus result in a mismatch. Thus, *Maya* fails to cure the deficiencies of *Konno* and vice versa.

For at least the above reasons, Claim 24 is allowable, as are all claims depending therefrom. Favorable action is requested.

Newly added Claims 30-46 are allowable at least for analogous reasons. For example, Independent Claim 35 recites the following:

An apparatus for interfacing with a surface within a computer-aided drawing environment, comprising:

a software program stored on a computer readable medium and operable, when executed on a processor, to:

determine that ***a first surface of a drawing*** comprises a first plurality of curves constituting a P x 1 surface condition, the P x 1 surface condition being defined by a number of first curves equal to P and only one second curve, wherein P is an integer greater than zero;

determine that ***a second surface of the drawing*** comprises a second plurality of curves constituting a first N x M surface condition, a first N x M surface condition being defined by a number of third curves equal to N and a number of fourth curves equal to M, wherein N and M are integers greater than one;

convert the P x 1 surface condition of the first surface into a second N x M surface condition to match the N x M surface condition of the second surface, the second N x M surface condition being defined by a number of fifth curves equal to N and

a number of sixth curves equal to M, wherein N and M are integers greater than one . . .

As another example, Independent Claim 30 recites “in response to determining that the plurality of curves constitute a $P \times 1$ surface condition, *converting* the $P \times 1$ surface condition into an $N \times M$ surface condition” in addition to “determining that *a first surface of a drawing* comprises a first plurality of curves constituting a $P \times 1$ surface condition, a $P \times 1$ surface condition being defined by a number of first curves equal to P and only one second curve, wherein P is an integer *greater than one*.”

Applicants respectfully submit that *Maya* does not disclose, either expressly or inherently, each and every claim element recited in Applicants’ Claim 30. In rejecting some of Applicants’ canceled claims, the Office Action cites pages 20-22 of *Maya* (pages 1-3 of the section entitled “Extruding surfaces”), stating the following:

[T]he left hand figure on page three shows a 1×1 surface comprised of a single path/guiding curve and a single profile curve thus indicating a $P \times 1$ surface condition and the figure on the right shows an $N \times M$ surface extruded from the 1×1 surface condition consisting of nine guiding curves and four profile curves thus indicating that the $P \times 1$ surface condition is now an $N \times M$ surface condition, since NURBS surfaces are created by default (see page 30, Output Geometry) and the distance between the profile curves can be specified by the Extrude Length parameter (see pages 23-23, Extrude Length) then the third and fourth curves are understood to be mathematically filling the space of the surface plane defined by the profile and path curves. See *Final Office Action* at 3-4.

In other words, the Examiner appears to be equating the pre-extrusion figure (left hand figure) to a $P \times 1$ surface condition and the post-extrusion figure (right hand figure) to an $N \times M$ surface condition, with the extrusion process being the conversion from $P \times 1$ to $M \times N$. The two curves of the right hand figure in *Maya*, however, do not constitute the claimed “first *surface* of a drawing.” In addition, these two curves do not constitute a $P \times 1$ surface condition, “wherein P is an integer *greater than one*.”

The Advisory Action states Applicants’ Specification “as originally filed discloses only where P is greater than zero” and that “P can be one.” While Applicants agree the Specification discloses that P can be one in various embodiments, Applicants respectfully disagree with the Advisory Action implication that Applicants’ Specification does not

disclose the limitation of “*wherein P is an integer greater than one.*” For example, FIGURE 2A and the corresponding detailed description disclose various example embodiments where P is an integer greater than one.

For at least the above reasons, Independent Claims 30, 35, and 41 are allowable, as are all claims depending respectively therefrom. Favorable action is requested.

B. The Proposed *Maya-Konno* Combination is Improper

Furthermore, Applicants respectfully submit that the Examiner has not provided the requisite teaching, suggestion, or motivation, either in the cited references or in the knowledge generally available to one of ordinary skill in the art at the time of Applicants’ invention to modify or combine *Harada* with the disclosure of *Konno* in the manner the Examiner proposes. Applicants’ claims are allowable for at least this additional reason.

1. The Legal Standard

The question raised under 35 U.S.C. § 103 is whether the prior art taken as a whole would suggest the claimed invention taken as a whole to one of ordinary skill in the art at the time of the invention. Accordingly, even if all elements of a claim are disclosed in various prior art references, which is certainly not the case here as discussed above, the claimed invention taken as a whole cannot be said to be obvious without some reason given in the prior art why one of ordinary skill at the time of the invention would have been prompted to modify the teachings of a reference or combine the teachings of multiple references to arrive at the claimed invention. Applicants respectfully submit that the Examiner has merely pieced together disjointed portions of references, with the benefit of hindsight using Applicants’ claims as a blueprint, in an attempt to reconstruct Applicants’ claims.

The governing Federal Circuit case law makes this strict legal standard clear.² According to the Federal Circuit, “a showing of a suggestion, teaching, or motivation to combine or modify prior art references is an essential component of an obviousness holding.” *In re Sang-Su Lee*, 277 F.3d 1338, 1343, 61 U.S.P.Q.2d 1430, 1433 (Fed. Cir. 2002) (quoting

² Note M.P.E.P. 2145 X.C. (“The Federal Circuit has produced a number of decisions overturning obviousness rejections due to a lack of suggestion in the prior art of the desirability of combining references.”).

Brown & Williamson Tobacco Corp. v. Philip Morris Inc., 229 F.3d 1120, 1124-25, 56 U.S.P.Q.2d 1456, 1459 (Fed. Cir. 2000)). “Evidence of a suggestion, teaching, or motivation . . . may flow from the prior art references themselves, the knowledge of one of ordinary skill in the art, or, in some cases, the nature of the problem to be solved.” *In re Dembiczak*, 175 F.3d 994, 999, 50 U.S.P.Q.2d 1614, 1617 (Fed. Cir. 1999). However, the “range of sources available . . . does not diminish the requirement for actual evidence.” *Id.* ***Although a prior art device “may be capable of being modified to run the way the apparatus is claimed, there must be a suggestion or motivation in the reference to do so.”*** *In re Mills*, 916 F.2d at 682, 16 U.S.P.Q.2d at 1432 (emphasis added). *See also In re Rouffet*, 149 F.3d 1350, 1357, 47 U.S.P.Q.2d 1453, 1457-58 (Fed. Cir. 1998) (***holding a prima facie case of obviousness not made where the combination of the references taught every element of the claimed invention but did not provide a motivation to combine***); *In Re Jones*, 958 F.2d 347, 351, 21 U.S.P.Q.2d 1941, 1944 (Fed. Cir. 1992) (“Conspicuously missing from this record is any evidence, other than the PTO’s speculation (if that can be called evidence) that one of ordinary skill in the herbicidal art would have been motivated to make the modification of the prior art salts necessary to arrive at” the claimed invention.). Even a determination that it would have been obvious to one of ordinary skill in the art at the time of the invention to try the proposed modification or combination is not sufficient to establish a *prima facie* case of obviousness. *See In re Fine*, 837 F.2d 1071, 1075, 5 U.S.P.Q.2d 1596, 1599 (Fed. Cir. 1988).

In addition, the M.P.E.P. and the Federal Circuit repeatedly warn against using an applicants’ disclosure as a blueprint to reconstruct the claimed invention. For example, the M.P.E.P. states, ***“The tendency to resort to ‘hindsight’ based upon applicants’ disclosure is often difficult to avoid due to the very nature of the examination process. However, impermissible hindsight must be avoided and the legal conclusion must be reached on the basis of the facts gleaned from the prior art.”*** M.P.E.P. § 2142 (emphasis added). The governing Federal Circuit cases are equally clear. “A critical step in analyzing the patentability of claims pursuant to [35 U.S.C. § 103] is casting the mind back to the time of invention, to consider the thinking of one of ordinary skill in the art, guided only by the prior art references and the then-accepted wisdom in the field. . . . Close adherence to this methodology is especially important in cases where the very ease with which the invention can be understood may prompt one ‘to fall victim to the insidious effect of a hindsight

syndrome *wherein that which only the invention taught is used against its teacher.*” *In re Kotzab*, 217 F.3d 1365, 1369, 55 U.S.P.Q.2d 1313, 1316 (Fed. Cir. 2000) (citations omitted; emphasis added). In *In re Kotzab*, the court noted that to prevent the use of hindsight based on the invention to defeat patentability of the invention, this court requires the examiner to show a motivation to combine the references that create the case of obviousness. *See id.* *See also, e.g., Grain Processing Corp. v. American Maize-Products*, 840 F.2d 902, 907, 5 U.S.P.Q.2d 1788, 1792 (Fed. Cir. 1988). Similarly, in *In re Dembiczak*, the Federal Circuit reversed a finding of obviousness by the Board, *explaining that the required evidence of such a teaching, suggestion, or motivation is essential to avoid impermissible hindsight reconstruction of an applicants’ invention:*

Our case law makes clear that the best defense against the subtle but powerful attraction of hind-sight obviousness analysis is *rigorous application of the requirement for a showing of the teaching or motivation to combine prior art references*. Combining prior art references without evidence of such a suggestion, teaching, or motivation simply takes the inventor's disclosure as a blueprint for piecing together the prior art to defeat patentability—the essence of hindsight.

175 F.3d at 999, 50 U.S.P.Q.2d at 1617 (emphasis added) (citations omitted; emphasis added).

2. The Analysis

With regard to dependent Claim 2 (and applicable to independent Claims 7, 12, 18, and 24), the Examiner states the that “it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of Maya Unlimited 2.0. to include the teachings of Konno et al. thereby providing a free-form surface generation method . . .” (*Office Action* at 6). As motivation for doing so, the Examiner refers to several advantages purported to be provided by the free-form surface generation method of *Konno*. *Id.* Thus, it appears that the Examiner has merely proposed alleged advantages for combining *Maya* with *Konno* (advantages that Applicants do not admit could even be achieved by combining these references in the manner the Examiner proposes). The Examiner has not pointed to any portions of the cited references, however, that would teach, suggest, or motivate one of ordinary skill in the art at the time of invention to incorporate the calculation

of cross boundary derivatives on all the boundary curves forming a face as disclosed in *Konno* with the extrusion method disclosed in *Maya*.

In other words, the alleged advantages of the systems, as provided by the Examiner, do not provide an explanation as to: (1) why it would have been obvious to one of ordinary skill in the art at the time of Applicants' invention (*without using Applicants' claims as a guide*) to modify the particular techniques disclosed in *Maya* with the cited disclosure in *Konno*; (2) how one of ordinary skill in the art at the time of Applicants' invention would have actually done so; and (3) how doing so would purportedly meet the limitations of Applicants' claims in a successful manner. Indeed, if it were sufficient for Examiners to merely point to a purported advantage of one reference and conclude that it would have been obvious to combine or modify that reference with other references simply based on that advantage (which, as should be evident from the case law discussed above, it certainly is not), then virtually any two or more references would be combinable just based on the fact the one reference states an advantage of its system. Of course, as the Federal Circuit has made clear and as discussed above, that is not the law.

Accordingly, Applicants respectfully submit that the Examiner's conclusions set forth in the Office Action do not meet the requirements set forth in the M.P.E.P. and the governing Federal Circuit case law for demonstrating a *prima facie* case of obviousness. The Examiner's attempt to modify or combine *Maya* with *Konno* appears to constitute the type of impermissible hindsight reconstruction of Applicants' claims, using Applicants' claims as a blueprint, that is specifically prohibited by the M.P.E.P. and governing Federal Circuit cases. Applicants respectfully submit that the rejection must therefore be withdrawn.

For at least these reasons, Applicants respectfully request that the rejection of the Claims 2 and 5-24 based on the proposed *Maya-Konno* combination be withdrawn and the claims allowed.

III. No Waiver

All of Applicants' arguments and amendments are without prejudice or disclaimer. Additionally, Applicants have merely discussed example distinctions from the references

cited by the Examiner. Other distinctions may exist, and Applicants reserve the right to discuss these additional distinctions in a later Response or on Appeal, if appropriate. By not responding to additional statements made by the Examiner, Applicants do not acquiesce to the Examiner's additional statements. The example distinctions discussed by Applicants are sufficient to overcome the Examiner's rejections.

CONCLUSION


Applicants have made an earnest attempt to place this case in condition for immediate allowance. For the foregoing reasons and for other reasons clear and apparent, Applicants respectfully request reconsideration and allowance of the pending claims.

If there are matters that can be discussed by telephone to advance prosecution of this application, Applicants invite the Examiner to contact its attorney at (214) 953-6809.

The Commissioner is hereby authorized to charge \$810.00 for the RCE and \$130.00 for a one month extension of time to Deposit Account No. 02-0384 of BAKER BOTTS L.L.P. No other fees are believed to be due; however, the Commissioner authorized to charge any additional fees or credits to Deposit Account No. 02-0384 of BAKER BOTTS L.L.P.

Respectfully submitted,

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